EOSDIS IV&V
Monthly Status Report

For the Period 8/1/97 to 8/31/97

(Deliverable 0201)

September 15, 1997

Prepared by:

INTERMETRICS
6301 Ivy Lane
Greenbelt, MD 20770

Prepared for:

NASA Goddard Space Flight Center
Code 505
Greenbelt, MD 20770

EOSDIS IV&V
Monthly Status Report

For the Period 8/1/97 to 8/31/97

(Deliverable 0201)

September 15, 1997

PREPARED BY:

Rich Saad
Business Operations Manager

APPROVED BY:

Frank Rockwell
Program Manager

INTERMETRICS
6301 Ivy Lane
Greenbelt, MD 20770

Table of Contents

1. PERFORMANCE INFORMATION

1.1 Contract Organization Chart

Exhibit 1-1 illustrates the current organizational structure of the EOSDIS IV&V team. The approximate number of personnel assigned to each technical task during August is also indicated.

1.2 Programmatic Information

a) Key Recent Accomplishments

- Submitted WV transition status reports to NASA via e-mail on 8/15 and 8/29. As of the end of August, 11 personnel have been committed to WV out of a total goal of 12. With two offers pending, we expect to have our full commitment of 12 personnel within the September time frame, as planned.

- Submitted CTRs for the newly approved Task SOWs for the period 8/97 through 9/97.

- Met with NASA to discuss converting the EOSDIS IV&V contract to a Performance Based Contract (PBC). Developed a draft Program Management Plan (PMP) outlining the PBC concept and submitted this plan to NASA for review.

- Continued on-going training of contract personnel. Training in August included seminars held in Fairmont, WV, on OMT (week of 8/4/97) and Java programming (8/27 - 8/29). In addition, several personnel participated in self-paced tutorials at the Goddard Learning Center on Fundamentals of Program Management and Windows 95.

- Ensured on-time delivery of contract deliverables as indicated in Exhibit 1-2.

b) Planned Activities

- Continue WV transition effort and submit semi-monthly status reports to NASA.

- Continue efforts with NASA to finalize the Performance Based Contracting (PBC) structure for the contract so that the new performance period (beginning 10/1/97) can be PBC-driven.

Exhibit 1-1: Org Chart (Landscape)

Expected Date Due	Dependency	Milestone/ Deliverable	Task #	Status*	Comments
8/1/97		EGS I&T Program Test Matrix	11	C	Submitted on time.
8/1/97		EGS I&T Confidence Test Package (Update)	11	C	Submitted on time.
8/1/97		L 7 EGS I&T Test Plan (Revision)	11	C	Submitted on time.
8/5/97		Qualitative Analysis of 6/23/97 RTM Baseline	8	C	Submitted on time.
8/12/97		CCR Impact Analysis Forms	8	C	Submitted on time.

EXHIBIT 1-2: Status of Milestones/Deliverables

- Continue on-going training of contract personnel. Future training initiatives include Sybase training scheduled for 9/8 - 9/12; Rational Rose training scheduled for 9/9 - 9/10; McCabe tools training scheduled for 9/15 - 9/18; and X-Runner training scheduled for 9/15 - 9/17. Internal training activities include refresher/enhancement training on two key contract-developed tools, PITS and TMDB.

- Continue tracking progress against the Master Milestone Chart as illustrated in Exhibit 1-3.

1.3   Technical Task Information

Task # 4: IV&V Infrastructure and Tool Development

a) Task Accomplishments

- Received new RTM baselines from ECS (8/8/97), EDOS (8/14/97), and ESDIS (8/20/97). Posted the new baselines to the Integrated Requirements Database (IRDB) using the transfer utilities that were previously developed.

- Updated IRDB trace and discrepancy reports following receipt of the new ECS, EDOS, and ESDIS RTM baselines. Posted necessary changes to the IRDB web page. (Note that the IRDB web page is accessible from the EOSDIS IV&V Homepage [http://fairmont.ivv.nasa.gov/ivv]).

- Delivered the IRDB demonstration as scheduled on 8/13/97 detailing homepage, reporting, and trace/impact analysis query capabilities.

- Produced new Access database to map our test cases to IATO and RCC test information. This is a repeat exercise to identify holes in the testing and redundant testing efforts across test activities based upon requirement allocation.

- Continued work on requested changes to the Test Management Database (TMDB) for Version 5.0 release due next month.

- Coordinated Java training course that was hosted in the NASA Software IV&V Facility for tool development and IV&V personnel. Also provided Project Issue Tracking System (PITS), Automated Requirements Database(ARDB), and RTM tool training to new WV hires and transfers.

- Initiated work on the Project Issue Tracking System (PITS) to add database relationship capabilities for issues relating to requirements or test cases.

Exhibit 1-3: Master Milestone Chart (Landscape)

b) Issues/Concerns

- None.

c) Subcontractor Performance

- EWA's performance has been very good. Specific activities included maintaining and operating the Test Management Database (TMDB).

d) Planned Activities

- Submit the Infrastructure Summary Status and Proposed Action Plan due on 9/19/97; also submit the updated ISE Users Guide due on 9/30/97.

- Deliver and demonstrate PITS Version 3.0 and TMDB Version 5.0, both due 9/24/97.

- Continue development of a WWW interface to the IRDB. Accept requests for additional IRDB reports.

- Continue to reconfigure IV&V databases, homepages, and tools as necessary to support ECS Release B IV&V analysis and I&T activities.

- Install new RTM baselines as they are received. Produce related reports. Transfer data to ISE Sybase databases as required.

are reported to Hughes, IV&V has been aiding Hughes in modifying/improving the Toolkit.

- Reviewed the ECS C++ coding Program Instruction (PI). Currently preparing a TAM which summarizes IV&V's comments.

- Working on a detailed analysis of the Prong Subsystem. Currently finalizing comments which will be delivered to the project in a TAM.

System and Interfaces Analysis Team:

- Completed qualitative assessment of the 6/23/97 RTM baseline requirement mappings and submitted TAM on 8/5/97. Khondeh Payne (Hughes) said that ECS personnel had generated 5 or 6 CCRs to correct problems identified in the TAM; however, their review of the TAM is not yet complete. IV&V plans to hold a telecon with ECS personnel to review all comments in the near future.

- Attended weekly ICD Audit Work-off Plan status meetings at Hughes.

- Continued participation with the DAS interface definition team to identify remaining issues to be addressed in the ICD Between ECS and DAS. Also continued participation with Landsat team to review three revised documents.

- Completed review of the ICD between ECS and NSIDC DAAC, and submitted comments on 8/18/97. This ICD has been approved by the ICWG.

- Reviewed and provided comments on the following CCRs for August:

CCR #	Title	Date Comments Delivered	CCB Date
423-42-02-001	Baseline the TSS-LaTIS ICD	8/5/97	8/26/97
423-42-01-012	Baseline Appendix F to the MODSD SPOD -WOTS ICD (EOS AM-1)	8/5/97	8/26/97
505-10-11-002	Update ASTER PIP to incorporate ERSDAC comments	8/14/97	9/11/97
423-41-45-001	Baseline the ECS-NSIDC DAAC ICD	8/18/97	8/26/97
423-41-56-001	Baseline ECS-DAS ICD	8/22/97	TBD
505-01-36-018A	EBNet Level 2 requirements updates	8/19/97	9/11/97
505-41-19-006	Remove ADEOS TOMS & NSCAT ancillary data set		9/16/97
505-41-40-007	Update Network configuration diagram (GSFC DAAC ICD)		9/16/97
505-01-35-072	MODIS rate buffered data rate update to EDOS-EGS IRD		9/16/97
505-42-01-011	Baseline the ADEOS II catalog interoperability IRD		9/16/97
505-41-18-006	Update the ASTER IRD to be in sync with the ASTER ICD		9/16/97
505-01-41-160	Flight Ops delivery dates		9/25/97
505-41-32-006	Metadata, DAAC, MOC messages, and calibration parameter updates (L7)		9/30/97

System Security Analysis Team:

- Presented information on EOSDIS Security efforts to the GAO. This presentation was very well received.

- Delivered a draft version of the EOSDIS Network Vulnerability Test Plan and Procedures for TRMM on 8/15/97. IV&V is currently modifying this document based on comments from the ESDIS Information Technology Security Official (EITSO).

- Completed SafeSuite tool evaluations in August. Several issues relating to the performance of the tool were noted and discussed with the ISS vendor. These issues were not deemed significant enough to hamper or delay planned network assessments utilizing the SafeSuite scanner.

- Scheduled EOSDIS network vulnerability assessments to be conducted at Goddard and Langley beginning in mid-September. All TRMM-related assessments are expected to be completed by 10/1/97.

Test Analysis and Witnessing Team:

- Provided results of the IV&V review of the System Verification (SV) and Acceptance Test (AT) procedures to Glenn Iona, ESDIS.

- Attended Peer Reviews of the AT procedures held from 8/8 to 8/15. At the meetings, provided feedback on these procedures directly to ECS.

- Still awaiting information on the revised test approach from the Test Methodology Working Group (TMWG).

ECS Assessment / Flash Report Team:

- Submitted the third in a series of ECS Assessment/Flash Reports to ESDIS on 8/29/97. These reports provide ESDIS with an assessment of the ECS program and its potential impacts to EOSDIS. The August report highlighted information on the AT Procedure Review, Review of the ECS C++ Coding PI, and Information on Traceability Issues identified in the 6/23 RTM qualitative TAM.

b) **Issues/Concerns**

- Another teleconference or a meeting between ECS Requirements Engineers and IV&V is needed so that feedback concerning the 6/23/97 RTM baseline is obtained before the 9/16/97 RTM release.

- ECS testing activities seem to be having schedule problems. Testing for RCC3 has been delayed until 10/21. The testing window is continuing to compress due to the

lack of development progress. This will have a ripple effect on IV&V test witnessing activities.

c) Subcontractor Performance

- Orbital (formerly CTA) is leading the System and Interfaces Analysis Team. Their technical staff also supports other integrated analysis teams within Task 8. Their performance has been very good.

- SES is leading the Test Analysis and Witnessing Team. Their technical staff also supports other integrated analysis teams within Task 8. Their performance has been very good.

d) Planned Activities

Planning and Rapid Analysis Team:

- Complete quantitative analysis of the 9/16/97 release of RTM; prepare and submit the quantitative analysis/monthly metrics report.

- Attend training for Rational Rose and the McCabe toolset.

- Produce new SLOC metrics using the new tape provided by ECS.

- Continue to work on metrics approach with Susan Sekira.

System and Interfaces Analysis Team:

- Continue qualitative analysis of FOS and interface requirements based on the 8/8/97 RTM baseline. Investigate use of CCR information, available in the ECS requirements homepage, in qualitative analysis. This analysis is currently being performed to ascertain if a script can be created to identify the differences between any two RTM baselines.

- Schedule telecom with ECS to discuss the qualitative analysis of the 6/23/97 RTM baseline.

- Begin analyzing the 9/16/97 RTM baseline and develop the resulting qualitative TAM.

- Support ongoing CCR reviews.

- Continue data entry into PITS ICWG repository, and present at next ICWG status meeting on 9/30.

- Continue support for Toolkit testing at Hughes.

System Security Analysis Team:

- Conduct network assessment tests at GSFC DAAC on the TRMM Support System (TSS) as well as TSDIS beginning on 9/16/97. Also conduct tests at LaRC DAAC. Results from this assessment will be passed to EOSDIS Security and TSS Element Managers approximately one week following the tests.

- Participate in meeting between Intermetrics EOSDIS Security and EBNet Managers to discuss alternative ways for conducting Network Assessments from the EBNet.

- Finalize the update to the EOSDIS Security Policy and Guidelines document.

Test Analysis and Witnessing Team:

- Continue supporting Release B.0 system verification procedures walkthroughs to include reviewing test procedures, analyzing requirements traceability, and providing comments/recommendations to both ESDIS and ECS test team.

- Awaiting information on the revised test approach from the Test Methodology Working Group (TMWG).

ECS Assessment / Flash Report Team:

- Continue to review information from across the IV&V efforts for inclusion in the 9/3/97 report.

- Monitor ECS progress through the next reporting period.

Task # 11: EOS Ground System Integration and Test

a) **Task Accomplishments**

EGS Version 1 Test Planning:

- Participated in joint NYMA/GSFC DAAC TRMM TSS - TSDIS testing.

- Participated in joint LaRC TRMM LATIS testing.

Integration Schedule Tracking and Analysis:

- Reviewed/Revised EGS I&T test schedule to support TMWG replan exercise.

- Monitored/Revised FOS Version 2 test schedule.

Integration Test Tool Definition and Plans:

- Collected monthly test package metrics.

- Continued TMDB tool use, including providing AT/EGS requirement trace reports to support Test Methodology Working Group (TMWG) replanning activity.

EGS Confidence Test Planning:

- Met DAAC telecon milestones for NSIDC, EDC, and GSFC.

- Continued DAAC planning activity which includes test scenario definition approach, strategy for functional requirements interpretation, and test package review (including ASTER review with EDC, and DAS/DAO interface review with GSFC).

- Delivered updated EGS I&T confidence test packages, including the incorporation of DAAC comments.

- Submitted draft test plan to Flight Systems Test Team, and coordinating Integrated Product Team (IPT) lead with M. Max

- Supported I&T IPT and TICTOC activities.

- Delivered updated EGS I&T Program Test Matrix.

- Reviewed ECS SDP Science AT procedures, and delivered comments to ECS. Incorporated information from AT procedures into EGS SFQ/ICT test strategy.

- Coordinated with MODIS and ASTER instrument teams.

- Continued Landsat 7 MRTT coordination, and revised Landsat 7 EGS I&T test plan.

- Participated in FOS Version 2 Acceptance Testing.

EGS Version 1 Integration and Test:

- Participated in TSS/TSDIS and LaTIS Acceptance Testing.

- Supported FOS DRB, ETS DRB, and EDOS with Discrepancy Reports (DRs).

b) Issues/Concerns

- The latest ESDIS Test Replan will have an impact on task objectives and deliverables. It will also potentially impact the working relationship that has been established with the DAACs.

c) Subcontractor Performance

- Subcontractor performance has been very good.

d) Planned Activities

- Continue to plan EGS I&T Science/Systems IPT test package targets. Reschedule based on DAAC input and/or ESDIS replan.

- Continue to plan EGS I&T test data plan target dates, working with EGS I&T Test Data Coordinator.

- Continue Landsat 7, AM-1, and Sage III Mission joint test planning.

- Complete monthly metrics and matrix update. Continue ongoing task support activities.

2. FINANCIAL/CONTRACTUAL INFORMATION

This Section

Has Been Removed

Due to Proprietary Content.